ON VARICOCELE

IN RELATION TO

ADMISSION TO THE SERVICES

BY

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The physical requirements of candidates for admission to the navy and army is a subject of interest and importance. The following notes, founded on 375 cases of varicocele treated by operation, refer to this ailment as a disqualifying cause for entering the services.

The cases were treated in the Royal Hospital, Portsmouth, in the decennium 1889 to 1898, where the surgical staff's experience of varicocele is exceptionally large. Probably there is no hospital in the kingdom in which so many cases of this kind are admitted. I find that 281 cases were operated on in St. Bartholomew's; 27 cases in the Norfolk and Norwich Hospital, representing a combined town and agricultural population; 212 cases in the General Hospital, Birmingham, a manufacturing centre, during the same ten years, whilst at the two civil hospitals at Plymouth, where the conditions are similar to those at Portsmouth, 314 cases of varicocele were operated on, and at the Royal Portsmouth Hospital there were 375, an average of 37.2 yearly.

This large number of varicoceles is out of proportion to the number of other surgical cases admitted, and is due to the close connection of Portsmouth, the chief naval arsenal of the empire, with the navy, where so many young men adopt that branch of Her Majesty's service as a career. Among the many disqualifying causes which debar candidates from admission into the public services, the existence of a varicocele is among the most frequent. Some of the patients treated were recruits for the army, but as the larger number were candidates for the navy, I have limited my figures to this service. The following table, compiled from figures kindly given me by Staff-Surgeon

J. J. Dimmis, R.N., shows the number of candidates examined for H.M.S. *St. Vincent*, the training-ship for boys at Portsmouth, for the five years 1893–1897, with the rejections for varicocele :—

Year.	Candidates Examined.	Rejected for Physical Defects.	Rate per Cent.	Rejected for Varicocele.	Rate per Cent.
1893	793	364	45.90	52	14 29
1894	861	363	42.16	55	15.15
1895	846	355	41.97	50	14.08
1896	632	314	49.68	69	21.97
1897	710	258	36.34	42	16.28

Yearly Average on Five Years.

Average Number Examined.	Average Number per Cent. Rejected.	Average Number per Cent. Rejected for Varicocele.
768.4	43.05	16.20

It is stated by Bennett[1] that of 100 cases of varicocele seen in hospital and private practice which sought treatment, 27 per cent. did so in order to meet the requirements of the public services. I am strongly of opinion, from practical experience, that too many men are rejected for this cause. There are probably few young men whom it would not be possible to reject on some physical ground if the examiner was so minded. Obviously it is necessary to reject cases associated with inguinal rupture, or in which the presence of a varicocele of considerable size causes a sense of aching after exercise, with inability to stand for practically any length of time. But such cases, I believe, are not common. In a large majority of instances the men were strong, well-developed young fellows from 15 to 18 years of age, in whom the enlargement of the spermatic veins was associated with robust sexual health. They were free from hæmorrhoids or other visible varices. Atrophy of the testicle—a consequence of pressure of blood in the veins—was seldom present, and the men themselves were absolutely unconscious of anything amiss, either from observation or symptoms, until they were told to be "set right" at the hospital and to come up again for examination.

Varicoceles, even when the veins are much dilated, are not due to a yielding and thinning of the walls, as takes place in

[1] On Varicocele, a Practical Treatise, 1891.

varices elsewhere (they never rupture), but, as pointed out by Pearse Gould,[1] are produced by a primary growth of venous tissue—in fact, to venous hypertrophy, consequent on the development and activity of the testicle.

In almost all these cases the left side was affected. The veins of the pampiniform plexus belong to the vascular Wolffian body in the embryo, and are more completely obliterated on the right side than on the left.

It is interesting to note the opinions of the medical officers of two of our great public schools. Dr. Clement Dukes,[2] Rugby, writes: "Boys between the ages of 13.5 and 15 have varicocele at the rate of 14 per cent.; varicocele requiring operation, 1 per cent." Dr. Clarence Haig-Brown,[2] Charterhouse, states: "Of 100 boys who enter a public school at 17 years of age, very few will be found out of 75 who do not exhibit vigour of mind and health of body. Some degree of varicocele, nearly always on the left side, will be found in from 25 to 30 per cent.; the cases in which it is sufficiently marked to require operation, about 1 per cent."

I may add the experience of two eminent living surgeons. One, held in the highest esteem by all who have been educated at St. Bartholomew's—Sir James Paget[3]—writes: "It is common enough to find varicoceles in quite healthy men, who being sufficiently careless or sensible to make light of it, suffer no harm either mental or bodily. In short, the cases in which varicocele is more than a trivial affair are very few." The other, Professor Senn,[4] of Chicago, states, "that of 9815 recruits examined, 2078 were affected with varicocele, that is, 21.17 per cent.;" and from his observation he is led to the conclusion that varicocele is very seldom a cause of disability for military service, and that operative treatment is very seldom indicated.

There is not much divergence of opinion as to the best operation when operative measures are required. I believe that two only are practised at present, viz., the "subcutaneous" and the "open." In the subcutaneous ligature you are in some degree working in the dark, and cannot be sure of including all the veins. Moreover, you are not able to shorten the cord, an important matter when the testicle hangs low. I have seen cases operated on by this method which were not cured. In the "open" procedure the veins are seen and accurately separated. I think that the "open" operation may

[1] Transactions of the Clinical Society, 1881.
[2] For these notes I am indebted to private communications.
[3] Clinical Lectures and Essays.
[4] Philadelphia Medical Journal, January 18, 1898.

be regarded as an infallible method of performing a radical cure. I have never known a failure.

In all these cases, that which I would call the "high and open" operation was adopted. The usual skin cleaning having been carried out, an incision about two inches in length is made immediately below the external abdominal ring. It is more easy to keep the wound here aseptic than lower in the scrotum. The veins are pressed forward into the wound and separated from the vas deferens. A blunt-pointed aneurysm needle armed with catgut is pushed behind the veins above and below, the intervening portion of vein removed, and the stumps, ligatured and tied together, are allowed to fall back. The wound is closed by fishing-gut sutures. It is the exception to the rule if healing by first intention does not take place, and the patient discharged within a fortnight from the day of operation. Probably there will be some orchitis, for which a suspensory bandage should be worn. I have never seen sloughing of the testicle. I have seen two cases in which slipping of the ligature occurred. This was followed by a hæmatocele, which retarded recovery.

In my recent cases local anæsthesia by a 5 per cent. solution of encaine was employed. It produced some œdema of the part, but the result was quite satisfactory.

To sum up: the inferences which I wish to draw are:—

1st. (*a*) That varicocele exists in a large number of young men, probably 18 to 20 per cent., and does not produce any physical discomfort.

(*b*) And ought not to be considered a cause for disqualifying them, except in rare and pronounced cases, from entering the services.

(*c*) And that such ordinary cases do not demand operative interference.

2nd. In cases where an operation is required, ligature and excision of veins by an open incision is the best to adopt. It is a simple undertaking, free from danger, and the result excellent.